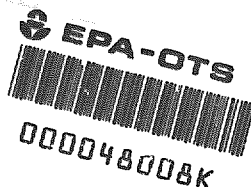


## CODING FORM FOR SRC INDEXING

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RESULTS OF RANGE FINDING TOXICOLOGICAL TEST ON 2-OXO-HEXAMETHYLENIMINE (CAPROLACTAM)		
Chemical Category		
CAPROLACTAM (105-60-2)		

Attachment 9



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OFFICE COPY

*Edwin E. Edman*  
6-8-53

Biochemical Research Department  
THE DOW CHEMICAL COMPANY

Subject: RESULTS OF RANGE FINDING TOXICOLOGICAL  
TESTS ON 2-OXO-HEXAMETHYLENIMINE  
(CAPROLACTAM)

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Signed G.E. Clock Date 5/2/53 Checked S. Madams Date 5-4-53

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UNIT INDEX

The subject material has a moderate acute oral toxicity and undiluted, causes moderate irritation of the skin. The undiluted material causes marked pain and irritation but did not cause permanent injury to the eye.

INDEX HEADING

Hexamethylenimine, 2-oxo-

PROBLEM

The subject material is an intermediate in the process for making dl-lysine HCl. What are the handling hazards, and what precautions are necessary to insure safe handling?

## SAMPLE INFORMATION

C.R.I. Name: 2-Oxo-hexamethylenimine

Source: Y. J. Dickert

Molecular Formula:  $C_6H_{11}ON$

Ref.: Old, du Pont

**Structural Formula:**

M.P.: 70°C

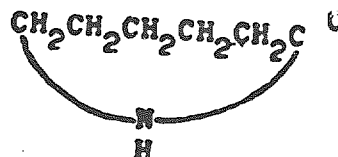
B.P.: 132°/12mm.

K N. : 7473-2

Date Sample Rec'd.: 6-25-52

Physical State: White solid

Sol.: Water, 10% NaOH



## SUMMARY OF RANGE FINDING TOXICOLOGICAL DATA

### Acute Oral Toxicity

Animal	Preparation Fed	Dose (g./kg.)	No. Died No. Fed	Response-Remarks
Rat	20% in H <sub>2</sub> O	1.0	2/2	Died within 24 hours.
Rat	20% in H <sub>2</sub> O	0.5	0/2	

### Eye Irritation - Rabbits

<u>Material</u>	<u>Treatment</u>	<u>Response-Remarks</u>
100%	Unwashed	Marked pain, irritation, and corneal injury which appeared to heal completely in about a week.
100%	Washed	Slight pain and irritation and moderate temporary corneal injury.

Skin Irritation - Rabbit

<u>Material</u>	<u>Condition of Skin</u>	<u>No. of Appl.</u>	<u>Site</u>	<u>Response-Remarks</u>
100%	Intact	8	Abdomen	Slight hyperemia at first, progressing to a moderate hyperemia and superficial necrosis.
100%	Abraded	8	Abdomen	Slightly more intense response than on intact skin.

Skin Absorption - Rabbit

No evidence of absorption was seen.

SUMMARY OF HAZARDS

Ingestion

2-Oxo-hexamethylenimine has a moderate acute oral toxicity.

Injury could result only from the accidental or willful ingestion of appreciable quantities of this material.

Eye Contact

2-Oxo-hexamethylenimine in a concentrated state will be painful, cause marked irritation of the conjunctival membranes, and cause marked corneal injury. Healing probably will require several days but is likely to be complete.

Skin Contact

2-Oxo-hexamethylenimine is moderately irritating to the skin. Repeated and prolonged contact will produce definite injury. Occasional short contacts should have no adverse effects.

Absorption

2-Oxo-hexamethylenimine presents no hazard from skin absorption.

PRECAUTIONS FOR SAFE HANDLING AND USE

It is most important to prevent contamination of the eyes. Protective devices will be determined in part by the nature of operations; in most cases glasses with side shields, and eye or face shields will be acceptable.

Measures should be taken to prevent prolonged and repeated contacts upon the skin. If this can not be accomplished by design of equipment and of operations, workmen may require some protective garments.

FIRST AID MEASURES

If the eyes are contaminated, they should be flushed with large volumes of water for about 15 minutes. Medical attention should be obtained.

Soap and water should be used for cleaning the skin. Any irritation of the skin should receive medical attention.

### CERTIFICATE OF AUTHENTICITY

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